CONFERENCE PROGRAMME

Asia Pacific
Industrial Engineering &
Management Systems
Conference

2023

23RD APIEMS

22-26 October | Kuala Lumpur, MALAYSIA

**"Industrial Engineering Empowering
Business Sustainability"**

Sponsored by

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The 23rd Asia Pacific Industrial Engineering and Management Systems (APIEMS)
and
The 26th Asia Pacific Division Meeting of The International Foundation for Production Research
22nd – 26th October 2023, Kuala Lumpur, Malaysia
Conference Program/ Tentative

Day 1: October 22nd, 2023 (Sunday)

| 16:00 – 19:00 | Registration | Foyer of Tun Sri |
| 18:00 – 20:00 | **Welcome Dinner** | Lanang 1 & 2 |

Day 2: October 23rd, 2023 (Monday)

08:00 – 09:00	**APIEMS Fellow Meeting**	Tun Sri Lanang 3
	Registration	
08:00 – 09:00	**Video Presentation from UKM, UKM-GSB, RHB & MyCEB**	
08:50 – 09:00	**VVIP Arrival**	
	Chairman, UKM Board of Director	
	Pro Vice Chancellor, UKM	
	APIEMS President	
	CEO of RHB Bank	
09:00 – 09:05	**Opening Performance**	
09:05 – 09:10	**Prayer Recitation by Mr. Muhammad Haneef**	
09:10 – 09:20	**Welcoming Remarks**	
	Prof. Dr. Hirokazu Kono (APIEMS President)	
09:20 – 09:30	**Welcoming Remarks**	
	Mr. Mohd Rashid Mohamad (CEO of RHB Bank)	
09:30 – 09:40	**Welcoming & Launching**	
	Prof. Emeritus Dato' Dr. Mohamad Abd Razak (Chairman, UKM Board of Director)	
09:40 – 10:00	**Book Launching – Prof. Dr. Zafir Khan Mohamed Makhbul**	Tamingsari Grand Ballroom, Royale Chulan KL
	Culture Performance	
10:00 – 10:30	**Keynote Speaker 1**	
	Prof. Dr. Ming Xu (Editor-in-Chief, Resources, Conservation & Recycling)	
10:30 – 11:00	**Keynote Speaker 2**	
	Prof. Dr. Stefan Minner (Editor-in-Chief, International Journal of Production Economic)	
11:00 – 11:15	**Refreshment/ Culture Performance**	
11:15 – 11:45	**Industrial Speaker**	
	Prof. Dr. Jim Li Hui Hong (CEO & Founder DIGIPAS Technologies Inc.)	
11:45 – 12:15	**Keynote Speaker 3**	
	Prof. Dr. I-Hsuan Hong (Associate Editor for Technical Journals, Asia-Pacific Journal of Operational Research)	
12:15 – 13:30	**Lunch break**	Taman Mahsuri
13:30 – 15:10	**IFPR-APR Meeting/ Parallel Session 2.1**	Tamigsari 1
15:20 – 17:00	**APIEMS Fellow & Board Meeting/ Parallel Session 2.2**	Tamigsari 1
End of Day 2 program		

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Parallel Session Schedule

		Parallel Session 2.1			
	Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**
	Session Chair	**Prof. Dr. Norzalita Abd Aziz (Universiti Kebangsaan Malaysia, Malaysia)**	**Prof. Dr. Norhayati Mohd Zain (KPJ University, Malaysia)**	**Prof. Dr. Hidetaka Nambo (Kanazawa University, Japan)**	**Prof. Dr. Ayako Sawada (Hokuriku Gakuin University, Japan)**
	Sub-theme	**Financial Services Technology (SDG 8)**	**Healthcare Management (SDG 3)**	**Reduced Inequalities Technology (SDG 10)**	**Sustainable Lifestyle & Operation (SDG 3)**
Day 2: October 23rd, 2023 (Monday) 13:30 – 15:10	**13:30 – 13:50**	**Mohd Asyraf Zulkifley**; Mohd Edil Abd Sukor; Ali Fayyaz Munir; Muhammad Hakimi Mohd Shafiai *Intelligent stock market manipulation detection using advanced artificial intelligence approach*	**Ida Rosnita Ismail**; Aini Ahmad; Puziah Yusof; Zainah Mohamed *Clinical competence gap analysis among registered nurses in a Malaysian private hospital*	**Yuko Shimomura**; Ryutaro Seki; Naoki Asakwa; Hiroki Wada *Walking simulator for blind children in VR using treadmill -incorporate elements of gamification-*	**Ayako Sawada**; Takashi Oyabu *Toward derivation of tourism activity ability of frailty and pre-frailty elderly*
	13:51 – 14:10	**Norzalita Abd Aziz**; Fei Long; Wan Hirwani Wan Hussain *The impacts of Big Data Analytics Capabilities (BDAC) on business performance and corporate sustainability in the banking sector*	**Wan Mohd Hirwani Wan Hussain** *Global trends of business models ambulatory care center: systematic and bibliometrics analysis*	**Hiroki Wada** *Development of an object color conversion system using XR technology for children with low vision*	**Takashi Oyabu**; Hidetaka Nambo; Haruhiko Kimura; Aijun Liu *Number of steps and biomarkers of the elderly*
	14:11 – 14:30	**Muhammad Iqbal Abu Latiffi**; Mohd Ridzwan Yaakub; Azuraliza Abu Bakar *Analyzing word representation methods for enhanced sentiment*	**Ahmad Azmi M. Ariffin**; Norzalita A. Aziz; Norhayati M. Zain; Bama V.V. Menon *Patient satisfaction index model and ip analysis: a case of Malaysian private hospital*	**Hiroshi Arai**; Syuichi Seto; Hiroyuki Kawabe; Yuko Shimomura *Technical difficulties in Automatic Manga Transcription Systems*	Kim Hua Tan; **Lintao Jing**; Leanne Chung *Karakuri and robotic integration point in the production system*
	14:31 – 14:50	Puteri NE Nohuddin; **Hanif Baharin** *A sentiment analysis-enhanced chatbot for elevating customer satisfaction in banking services*	**Ching-Jung Ting;** Yu-Ying Huang; Mei-Ling Wu *Home health care routing and scheduling with simulated annealing*	**Johan Krisnanto Runtuk**; Poh Kiat Ng; Shih Yin Ooi *Applying TRIZ and DEMATEL in green supply chain challenges*	**Natchareeya Aphinakphong;** Panitarn Peerapattana; Thitipong Jamrus *Study and development of a pre-paid system and logistic system management for agricultural inputs of ABC company – case study*
	14:51 – 15:10	**Lai Wei Sieng**; Nurul Izzah Syakirah Shahirul Basir	**Abdulrahman Khamaj**	**Chien-Liang Liu;** Chia-Chen Chung	**Kento Komae;** Kotomichi Matsuno; Tanimizu Yoshitaka

		Factors influencing saving behaviors among Malaysian	User perceptions of mHealth applications usability in the Middle East	Improving anomaly detection and location with reverse distillation	A dynamic pricing model for direct sales of fresh foods considering customer evaluation
		Break			
		Parallel Session 2.2			
	Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**
	Session Chair	**Prof. Dr. Norzalita Abd Aziz (Universiti Kebangsaan Malaysia, Malaysia)**	**Prof. Dr. Naoki Asakawa (Kanazawa University, Japan)**	**Ms. Hui-Wen Hsiao (National Yunlin University of Science & Technology, Taiwan)**	**Prof. Shey-Huei Sheu (Asia University, Taiwan)**
	Sub-theme	**Financial Services Technology (SDG 8)**	**Operation Technology (SDG 9)**	**Green Innovation (SDG 15)**	**Management Science & Technology (SDG 9)**
Day 2: October 23rd, 2023 (Monday) 15:20 – 17:20	**15:20 – 15:40**	**Wan Mohd Hirwani Wan Hussain**; Norzalita Abdul Aziz *Assessment of Big Data Analytics (BDAC) adoptions in small medium enterprise (SMEs): bibliometrics systematic analysis*	**Wanatchapong Kongkaew**; Kunanon Intapan; Supattra Mitundee; Siriphat Saranobphakhun *A firefly algorithm for the blood delivery routing problem with time and route-insurgency-level constraints*	**Hui-Wen Hsiao**; Dengchuan Cai *A study of self-massage product design on dorsal side of the foot*	**Shey-Huei Sheu** *Optimization of replacement last policy for a two-unit system under shock damage interaction*
	15:41 – 16:00	**Nor Azwan Mohamed Kamari**; Ahmad Asrul Ibrahim; Mohd Hairi Mohd Zaman; Mohd Faisal Ibrahim *Comparative and applications of artificial neural network topologies for stock market forecasting*	**Mika Edamura**; Tomoko Okabe; Yuko Shimomura; Hiroyuki Kawabe *Analysis of childrens singing with focusing on pitch, interval, and contour*	**Ching-Yun Chen**; Dengchuan Cai *Do-it-yourself toe assist for FJM foot therapists*	**Runchana Sinthavalai** *FMEA in new assemble line of new product: a case study in motorcycling manufacturer*
	16:01 – 16:20	**Zinatul Ashiqin Zainol**; Norzalita Abdul Aziz; Wan Mohd. Hirwani Wan Hussain; Jady@Zaidi Hassim; Nor Akhmal Hasmin Hasmin; Nurul Elliyana Abdul Jamal *Patent strategy for financial institution in Malaysia*	**Tomoko Okabe**; Mika Edamura; Yuko Shimomura *Inclusive childcare environment for normal children to understand visually impaired children*	**Dengchuan Cai** *Assistive device design for reflexology of plantar side of the foot*	**Rachmawati Wangsaputra**; Praditya Ajidarma *System thinking implementation in social projects for waste management based on penta-helix sustainable collaboration*
	16:21 – 16:40	**Phattara Khumprom**; Nikorn Sirivongpaisal; Dollaya Buakum; Alex Davila-Frias; Sirirat Suwatcharachaitiwong; Laksiri Treeranurat; Jirayus Jindakul	**Kaori Sato**; Akio Kamiya; Yuko Shimomura	**Yuting Hsiao**; Dengchuan Cai	**Keisuke Nagasawa**; Katsumi Morikawa; Katsuhiko Takahashi

		The stock-flow classification model using ensemble machine learning approach for particle board inventory	*Measurements of standing point under different conditions of door opening movement in elderly people*	*Design and development of massage aids on both sides of the foot*	*Robust and sustainable closed-loop supply chain network design for preventing unemployment at disruption*
16:41 – 17:00		**Masahiro Toshiro**; Yusuke Hikidera; Kenzo Ogi; Norio Hibiki *Credit scoring model for educational loan using information on disapproved loan applicants*	**Ryoji Watanabe**; Yuko Shimomura; Hiroyuki Kawabe *Psychological tendencies of university students who aspire to be interpersonal assistants: results of the latest version of the MMPI-3 test*	**Yunching Huang**; Dengchuan Cai; Peng Li-Hsun *The effect of painting on the creator's heart rate and blood oxygen*	**Faiz Azizul**; Yudi Fernando; Diyana Kamarudin; Yuserrie Zainuddin *Mapping the academic landscape of digital bank: a bibliometric analysis on emerging trends and future research directions*
17:01 – 17:20					**Peace Y. L. Liu**; James J.H. Liou; Sun-Weng Huang *Exploring the key obstructive factors to ESG adoption in enterprises*
End of Day 2 program					

Day 3: October 24th, 2023 (Tuesday)					
Parallel Session 3.1					
Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**	**Executive Boardroom**
Session Chair	**Dr. Muhammad Akbar (Bandung Institute of Technology, Indonesia)**	**Prof. Dr. Chia-Yu Hsu (National Taiwan University of Science and Technology, Taiwan)**	**Assoc. Prof. Dr. Yasuhiko Takemoto (Kindai University, Japan)**	**Assoc. Prof. Dr. Dhon Dungca (Asian Institute of Maritime Studies, Philippines)**	**Dr. Phi-Hung Nguyen (FPT University, Vietnam)**
Sub-theme	**Circular Economy & Sustainability Production & Operation (SDG 12/13)**	**Management Science (SDG 9)**	**Green Circular Economy Innovation (SDG 12/13)**	**Sustainable Development Goals & Sustainable Lifestyle (SDG 11)**	**Sustainable Finance & Supply Chain Management (SDG 8/12)**
08:21 – 08:40	Ega Rizky Ramadhan; **Muhammad Akbar**; Dradjad Irianto *A net carbon saving method for analyzing environmental loss-benefit: case study in converter kit applications on fishing boats*	Alvi Yusarita; **Andi Cakravastia**; Rully Tri Cahyono *Model for picking and packing customer orders to minimize makespan in fulfillment center warehouse*	**Yasuhiko Takemoto**; Ikuo Arizono *A study on stability evaluation in process variance using 7ehaviou and information theory*	**Dhon G. Dungca**; Tristal Jane S. De Ocampo *Economic, environmental, and social impact of the Philippine governments phase-4 connectivity projects*	**Phi-Hung Nguyen**; Hong-Quan Le; Linh-Chi Tran *Exploring critical barriers for green bonds issuance using an integrated fuzzy delphi and fuzzy DEMATEL approach; a case study in Vietnam*
08:41 – 09:00	**Budi Marpaung**; Wisnu Aribowo; Suprayogi Suprayogi; Abdul Hakim Halim *An integrated inventory and order pick-up model considering capacities of vendors, multiple types of vehicles, and duration of vehicle trips for the multi-vendor single-buyer system*	Masahide Yamamoto; Tsugumi Ando; **Sara Ito; Momoka Tominaga;** Miu Fujita; **Konami Mizuno; Riko Yokoyama** *Examining tour escorts wage system to foster greater efforts*	**Adham Sandy Yudhatama;** Rachmawati Wangsaputra; Ni Luh Saddhwi Saraswati Adnyani *Cloud-based business intelligence dashboard design in PTFI logistic system's cargo and shipping management*	**Eriko Saito**; Takahiro Ohno *Self-perceived competencies acquired through university career development education by young employees in their first three years as new graduates in Japanese company*	**Triafini Nugroho**; Iphov Kumala Sriwana; Muhammad Nashir Ardiansyah; Muhammad Ihsas Alvi Ibrahim *Supply chain analysis regarded to productivity of mechanical equipment in coal mining*
09:01 – 09:20	Chien-Chih Wang; **Che-Yu Hung;** Ting-You Yeh *An empirical study of applying*	**Yosuke Yamamoto**; Yu Ogasawara; Kimitoshi Sato	**Diana Dragomir**; Denisa Szabo; Diana Blagu; Daniela Popescu; Mihai Dragomir *Sustainable production – from*	**Jiho Lee**; Janghyeok Yoon; Ji-Wan Ha; Ki-Su Park; Nayeon Kim; Kyunghun Kang *Treatable dementia discrimination model*	Khairur Rijal Bin Jamaludin **Rosdan Bin Rosman**; Sha'ri Bin Mohd Yusof; Aedah Abd Rahman; Harman Bin Hassan; Rasyidah Abd Rahman *Assessment of sustainable supply*

	reinforcement learning to optimize injection molding equipment parameters for plastic tray	*Revenue management for bundle service of island region*	*individual components to a frame of reference*	*based on deep learning and speech data from normal pressure hydrocephalus patients*	*chain management in supply chain practices and operations in automotive sector of Malaysia*
09:21 – 09:40	**Surasak Matitopanum**; Rungwasun Kraiklang; Rapeepan Pitakaso; Thanatkij Srichok; Surajet Khonjun; Chakat Chueadee; Peerawat Luesak *Investigating the influence of friction stir processing on wear behavior of aluminum surface composites*	**Veterina Nosadila Riaventin**; I Nyoman Omni Wipra Laksana Uttama; Safuan; Tedy Herdian *Implementation of truck appointment system using truck arrival scheduling optimization*	**Yuriko Toda**; Takashi Hasuike *Optimization of the energy mix by region, considering the disruption of fossil fuels*	**Seoin Park**; Byeonghoon Jeon; Jooho Kim; Yunho Joung; Jiho Lee; Janghyeok Yoon *Speech emotion multi-label classification and intensity prediction based on transformers for mental health care*	**Lovina Yogarajan**; Mohd Helmi Ali; Lokhman Hakim Osman; Ming-Lang Tseng *Predicting the intention and adoption of hydroponics among Malaysia urbanites*
09:41 – 10:00	**Thao Huong Tran-Vo**; Soondo Hong *Reducing completion time of order picking and packing process in multi-depot warehouses with limited workforce level*	**Lei Zhou**; Shoichiro Miyamoto; Yoshinobu Tamura; Hisashi Yamamoto *A reliability model for street lighting systems subject to random shock under dynamic environments*	**Yuan Wang** *Laser doppler in hardness inspection of powder metallurgy*	**Junhee Hong**; Junghyeon Jho; Taegyu Lim; Kyungtae Park; Jiho Lee; Janghyeok Yoon *Prediction of cognitive impairment using sleep life-log data and LSTM model*	**Jim Kery Li**; Kim Hua Tan *Take the sting out of innovation failure: the secret to successful transformative innovation*
10:01 – 10:20	**Rahadini Windia Habiba**; Wisnu Aribowo *Heuristic methods for dynamic double hoist scheduling problem in surface treatment*	**Shingo Kawamura**; Sen Zhang; Kenta Nakamura; Haruka Yamashita *A study on factor analysis of stock price fluctuations for evaluating the portfolio companies*	**Azian Ibrahim**; Yudi Fernando; Ming-Lang Tseng *Exploring low carbon warehouse for achieving operational excellence*	**Asma-Qamaliah Abdul-Hamid**; Mohd Helmi Ali; Lokhman Hakim Osman; Ming-Lang Tseng; Kim Hua Tan *Moderating factors in uncertain crisis: a review on SCOR performance in palm oil industry*	**Mazzlida Mat Deli**; Siti Norliyana Harun *Water footprint of crops cultivation in Malaysia*
Break					

Parallel Session 3.2					
Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**	**Executive Boardroom**
Session Chair	Dr. Yosi Agustina Hidayat (Bandung Institute of Technology, Indonesia)	Dr. Hennie Husniah (Langlangbuana University, Indonesia)	Dr. Shuhei Ota (Kanagawa University, Japan)	Assoc. Prof. Dr. Yudi Fernando (Universiti Malaysia Pahang, Malaysia)	Dr. Ainul Huda Jamil (Universiti Kebangsaan Malaysia, Malaysia)
Sub-theme	Circular Economy & Sustainability Production & Operation (SDG 12/13)	Management Science (SDG 9)	Management Science (SDG 9)	Sustainable Development Goals & Sustainable Lifestyle (SDG 11)	Sustainable Finance & Supply Chain Management (SDG 8/12)
10:31 – 10:50	**Yosi Agustina Hidayat**; Titah Yudhistira; Lucia Diawati; Jasmine Adjani; Arnoldus Janssen Bevan Pramudito *The development of food & beverages sub-sector parameters for Circular Economy (CE) & Low Carbon Development (LCD) implementation*	**Takayuki Suzuki**; Ryuzen Kawabe; Yoshito Amai; Masahiko Ishihara; Yasuyuki Shirai; Yusuke Goto *Estimating the price sensitivity of e-commerce site users based on anomaly detection methods using probability ellipses*	**Kuan-Ting Li**; Kuo-Hao Chang; Jiuh-Biing Sheu; Yenming J. Chen; Chih-Hao Liu; Tzu-Yin Chang *Post-disaster-network-based decision support model with mitigation analysis*	**Mitsuki Nakano**; Kotomichi Matsuno; Takahiro Ohno; Yoshikuni Edakawa; Takaaki Kawanaka; Shinya Takata *Intention formation model of purchasing non-standard vegetables package through e-commerce*	**Ainul Huda Jamil**; Mohd Helmi Ali; Mazzlida Mat Deli; Ummu Ajirah Abdul Rauf *Anti-money laundering in supply chain risk management: comparative review*
10:51 – 11:10	Ngan Seok Peng; Ngan Sue Lin; **Lam Hon Loong** *Boosting ESG performance with Life Cycle Assessment solution: Identification of hotspots and bottlenecks*	**Yudai Tagami**; Ikuo Arizono; Yasuhiko Takemoto *Statistical mechanics model for behaviour M/M/s queueing system with reneging phenomenon*	**Kenji Uebayashi**; Takashi Hasuike *Consideration of stop-loss in reinforcement learning-based financial trading strategies*	**Hayeon Ku**; Minseo Lee; Seulgi Kim; Seung-eun Oh; Jiho Lee; Janghyeok Yoon *ResNet-based gender and age group prediction model using free speech data*	**Daichi Arimizu**; Takahumi Ueda; Takaaki Nakamura; Aya Ishigaki *Explainable demand forecasting method using correspondence between economic indicator*
11:11 – 11:30	**Ye-Won Park**; Seung-Hyun Choi; Kwang-Jae Kim *Contrastive learning-based active learning query strategy for wafer map defect pattern classification*	**Bermawi P. Iskandar**; Andi Cakravastia; Hennie Husniah *Reducing warranty fraud with inspection and combination warranty policy*	**Kanta Morimoto**; Tianxiang Yang; Masayuki Goto *An embedding based analysis of multilingual reviews for service quality improvement of accommodations for foreign travelers*	**Yudi Fernando**; Risman Kusaimi Ali; Ming-Lang Tseng *Enablers of carbon credits based on blockchain for the green economy: the role of cyber security and digital forensic capabilities*	**Mohammed Masum Billah**; Mohd Helmi Ali; Mazzlida Mat Deli *Comparative study between the determinants of individual intention and organizational intention to adopt artificial intelligence technologies*
11:31 – 11:50	**Xin-Pei Wu**; Kuo-Hao Chang	Tian-Shyug Lee; Hsiu-Mei Lee; **Fu-Wei Lee**	**Shuhei Ota**; Mitsuhito Kimura	**Yueh-Ning Hsu** & Kuo-Hao Chang	**ZhenWei Liao**; Mohd Helmi Ali

Day 3: October 24th, 2023 (Tuesday) 10:30 – 12:30

	Joint optimization of simultaneous condition-based maintenance and inventory policy considering supplier reliability in a continuously monitoring system with two failure modes	*Constructing a financial time series forecasting framework based on feature selection and machine learning approaches*	*Construction of multivariate distributions for dependence modeling in reliability analysis*	*Optimal decisions for flood control infrastructure under the impacts of climate change*	*Based on the dynamic capabilities theory, explore the corporate sustainability capabilities that affect supply chain reconfiguration and resilience in China's tourism hospitality industry*
11:51 – 12:10	**Kazuki Shibata**; Shunichi Ohmori; Tomomi Kito *Building a sustainable fishery system: a study of the environmental and economic impacts of fishermen's behaviors*	Hyungjun Park; Dong Gu Choi; **Daiki Min** *A multi-agent system for the inventory allocation problem in a supply chain using reinforcement learning and MIP*	**Nako Iwaji**; Kimitoshi Sato *Optimal pricing model with network effects in competitive market*	Pin-Si Chou; Kai-Tang Fan; **Ching-Ying Liang**; Mingchih Chen; Chi Wen Chen *Investigating the difference between corporate social responsibility report and corporate sustainability report: evidence from Taiwan notebook OEM industry*	**Jiyeon Lee**; Ilkyeong Moon *Inventory allocation for rental and sales demands in a two-echelon distribution system*
12:11 – 12:30	**Tung-Chin Hsieh**; Kuo-Hao Chang; Chung-Ming Kuo; Hsiu-Ping Lin *Unsupervised learning-based PHM method for predictive maintenance of air compressors in the semiconductor industry an empirical study*	**Chi-Kuang Chen**; Robby Lidia Reyes *An empirical investigation of SWOT analysis as strategic management tool: the aspects of 4P and business excellence*	**Yuri Ishii**; Takashi Hasuike *Evaluation of measures to provide information on congestion to disperse tourists*	**Yuki Hori** *Proposal to reduce radioactive waste from PET (Positron Emission Tomography) radiopharmaceutical production facilities*	**Xiaohan Zhang**; Mohd Helmi Ali *Challenges impeding digital transformation of Chinese micro and small enterprises: empirical evidence using fuzzy Delphi method*
Lunch Break					

		Parallel Session 3.3				
	Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**	**Executive Boardroom**
	Session Chair	**Dr. Mazzlida Mat Deli (Universiti Kebangsaan Malaysia, Malaysia)**	**Dr. Kazuki Hiranai (National Institute of Occupational Safety and Health, Japan)**	**Dr. Anas Ma'ruf (Bandung Institute of Technology, Indonesia)**	**Dr. Maryam Jamilah Asha'ari (Universiti Kebangsaan Malaysia, Malaysia)**	**Prof. Dr. Chia-Yen Lee (National Taiwan University, Taiwan)**
	Sub-theme	**Circular Economy & Sustainability Production & Operation (SDG 12/13)**	**Management Science (SDG 9)**	**Business & Economic Decision-making Model (SDG 8)**	**Sustainable Development Goals & Sustainable Lifestyle (SDG 11)**	**Sustainable Operations Research (SDG 12/13)**
Day 3: October 24th, 2023 (Tuesday) 13:30 – 15:30	**13:31 – 13:50**	Mazzlida Mat Deli; Maryam Jamilah Ashaari; Ummu Ajirah Abdul Rauf; Ainul Huda Jamil; **Nur Syazwani Ahmad Safian** *Breaking barriers: strategies to promote sustainable Malaysian palm oil in the global market*	Chao-Lung Yang; **Melkamu Mengistnew Teshome**; Tamirat Yifter; Loke Kar Seng *Optimization of patient flows in Ethiopian hospital: a simulation-based analysis of personnel configuration*	Shergio Rizkyputra; **Anas Ma'ruf** *Development of an automated visual inspection method*	**Maryam Jamilah Asha'ari**; Salina Daud; Mazzlida Mat Deli; Ummu Ajirah Abdul Rauf; Siti Intan Nurdiana Wong; Ainul Huda Jamil *Islam and sustainability: bibliometric analysis*	**Tao-Cheng Huang**; Kuo-Hao Chang; Jiuh-Biing Sheu; Yenming J. Chen; Chih-Hao Liu; Tzu-Yin Chang *Optimal medical and transportation resource allocation models in the preparation phase of earthquakes*
	13:51 – 14:10	**Shunya Jinda**; Kenta Miyahara; Fuyuto Toda; Katsuhiko Takahashi; Katsumi Morikawa; Keisuke Nagasawa; Kiyokazu Tanaka; Satoshi Okada; Shimpei Oyama; Reona Takamura; Satoshi Nishikawa; Masaki Otani & Daiki Ishida *Productivity assessment and identification of areas for improvement in the dismantling of end-of-life vehicles*	**Huynh Trung Luong**; Pongpanot Karat *A supply chain network design considering disruption at distribution centers with capacity constraint*	**Daisuke Nakamura**; Yuta Sakai; Masayuki Goto *A review analysis by automizing extraction of query-focused summarization*	**Lei Luo**; Masato Takanokura *Dark patterns in user interface design on Chinese and Japanese shopping websites*	Nor Etiqah Md Radzi; **Emy Ezura A-Jalil**; Musyrifah Mahmod; Erni Nerina Awang Salleh *Are WEEE ready from the source? A triangulation understanding*
	14:11 – 14:30	**Muhammad Akbar**; Takashi Irohara *The total misplaced: a metric to measure incorrect sequence level in production plant*	**Gita Permata Liansari**; Wisnu Aribowo; Dradjad Irianto *Relationship between Perceived quality, perceived values, perceived risks, and consumer satisfaction in local coffee shops in Bandung, West Java, Indonesia*	**Haruki Miyamoto** *An analysis of delivery allocation in food delivery services considering multi-pick and employee experience*	**Sang Yanxi**; Ngan Sue Lin; Zhang Xiaohan; Pan Ruiming *How to help new energy electric vehicle battery supply chain achieve sustainable development*	**Tzu-Yun Cheng**; Cheng-Ta Yeh; Sung-Fan Chiu; Ping-Chen Chang *Simulation optimization for solving a component configuration problem of system reliability maximization in a*

					stochastic-flow network
14:31 – 14:50	**Kenichi Nakashima**; Kimitoshi Sato *A study on the resilience of closed loop supply chains under uncertainty*	**Kazuki Hiranai**; Atsushi Sugama *Investigation of efficacy of feature selection method for extracting importance of joint movement in pushing tasks with momentary loss of hand reaction forces*	**Kenshiro Tsubota**; Haruka Yamashita *Development of Othello AI that plays close battles*	Ryan HY Lin; Fang-Yu Yeh; Shu-Hao Chang; **Hsuan-Fang Hung** *Analyzing the business model of open government data: the case of civil IoT Taiwan data service platform*	**Mitsuhiro Kimura**; Shuhei Ota *A note on statistical detection method for cascading failures in roller bearings using gaussian copula*
14:51 – 15:10	Yu-Ju Lin; Yi-Fang Li; **Chin-Yin Huang** *Prediction for remaining useful life of ion beam etching cooling system using ontology-based reasoning system integrated with machine learning*	**Aoi Tanaka**; Takashi Hasuike *Evaluation of priority boarding pass distribution method in theme park*	**Yung-Hsun Chang**; Chia-Wei Kuo; Kwei-Long Huang *Optimal selling strategies for multiple products: probabilistic selling or product bundling*	**Rou-Rou Shen**; Chia-Hsuan Lee; Chien-Hua Huang; Ying-Po Hsu; Tien-Lung Sun *Artificial intelligence image recognition technology and data for assessing the fall risk of elderly people*	**Gary Yu-Hsin Chen**; Ping-Shun Chen *Solving optimization problems with OpenMP and C++ AMP parallelization platforms*
15:11 – 15:30	**The Jin Ai**; Antony Hopkins *Sustainable Production Planning in a Fish Processing Industry*	**Merita Bernik**; Lucia Diawati; Djadjad Irianto *Improvement of quality award criteria in Indonesia based on the three excellence quality models (Deming Prize, MBNQA, EFQM): literature study*	**Taiki Tominaga** *Spare parts inventory management of construction equipment based on IoT monitoring system*	**Wildan Trusaji**; Sukoyo; Ardianto Satriawan; Isa Anshori *A preliminary study: social return on investment of prosthetic arm*	**Chia-Yen Lee**; Yen-Wen Chen *Reinforcement learning and data envelopment analysis for capacity planning with demand volatility*
Break					

Parallel Session 3.4					
Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**	**Executive Boardroom**
Session Chair	**Dr. Chen-Ju Lin (Yuan Ze University, Taiwan)**	**Prof. Dr. Yu Song (Fukuoka Institute of Technology, Japan)**	**Dr. Md Shamimul Islam (BRAC University, Bangladesh)**	**Dr. Che-Yu Hung (Ming Chi University of Technology, Taiwan)**	**Dr. Deny Ratna Yuniartha (Universitas Atma Jaya Yogyakarta, Indonesia)**
Sub-theme	**Circular Economy & Sustainability Production & Operation (SDG 12/13)**	**Management Science (SDG 9)**	**Business & Economic Decision-making Model (SDG 8)**	**Sustainable Development Goals & Sustainable Lifestyle (SDG 11)**	**Sustainable Operations Research (SDG 12/13)**
15:41 – 16:00	**Sangwoon Lim**; Jonghwa Lee; Beomhui Lee; Byung-In Kim *Modelling and algorithm for a real-world steel coil ship stowage planning problem*	**Nor Hafizah Ibrahim**; Zafir Khan Mohamed Makhbul; Abu Hanifah Ayob; Anitawati Mohd Lokman *Integrating Kansei engineering to unveil the emotional landscape of service industry employees*	**Md Shamimul Islam** *Exploring supply chain risk factors in the textile industry of Bangladesh: an inductive approach*	Ariana Chang; **Hsiu-Mei Lee**; Michael Tian-Shyug Lee *Managing institutional complexity: a study of sustainability disclosure in retail chains*	Elisabeth Sylvia Faradilla Belinda; **Deny Ratna Yuniartha**; Ign. Luddy Indra Purnama *A rolling horizon approach for workload-based shift scheduling*
16:01 – 16:20	**Kuo-Jui Wu**; Caiyan Huang; Min Fu; Ming-Lang Tseng; Anthony S.F. Chiu *Adopting hybrid method identifies the dynamics change toward carbon neutrality*	**Wataru Nugata**; Kimitoshi Sato *Profitability effects of reducing the number of rooming plans under dynamic price strategy*	**Masaki Masuda**; Ayako Yamagiwa; Masayuki Goto *A predictive model of future sales prices for second-hand smartphone devices*	**Ya-Lan Chan**; An-Ting Zhu *A study on consumers' cognition of corporate social responsibility*	**Kohei Yamashita**; Takashi Tanaka Takashi Irohara; Naomi Sugiyama *Simulated annealing based algorithm for storage location assignment problem under the mixed shelve strategy in a warehouse*
16:21 – 16:40	Cheng-ju Yu; **Chen-ju Lin** *Selecting the process with a higher capability under the 13ehaviou-saunders distribution by using generalized confidence interval*	**Shu-Fen Li**; Yan-Chu Yeh; Chia-Hsien Chang *Enhance order delivery performance based on real-time production data: case in a metalworking manufacturer*	**Atsushi Tadokoro**; Takaki Kawamoto; Takashi Hasuike *Forecasting the volume of orders during the peak season at a flower arrangement EC site*	**Che-Yu Hung**; Chien-Chih Wang; Bo Zhu *An empirical study of factors influencing China's inbound tourism industry using a mixed effects model*	**Andri Rachmat Kumalasian Nasution**; Abdul Hakim Halim; Mohammad Miradj Isnaini; Suprayogi Suprayogi *An integrated dynamic batch scheduling model for single vendor single buyer production system network*
16:41 – 17:00	Takuya Nakagawa; **Daisuke Hirotani**	**Kai-Bin Huang**; Hsiu-Mei Lee; Jonathan Lee; Jy-Ping Wu; Yungchang Liang	**Taichi Imafuku**; Yuta Sakai; Masayuki Goto	Kai-Chao Yao, His-Huang Hsieh, Chih-Han Chen, **Ching-Hsin Wang**	**Peerawat Luesak**; Surasak Matitopanum; Rapeepan Pitakaso; Thanatkij Srichok;

Day 3: October 24th, 2023 (Tuesday) 15:40 – 17:40

					Surajet Khonjun; Worapot Sirirak; Ganokgarn Jirasirilerd
	Profit maximization model for green supply chain considering some kinds of green level	*Deep model-based multi-task learning for electricity load forecasting*	*Adversarial counterfactual regression with importance weighting*	*Research on sustainable management strategies of rubber recycling industry from ESG perspective of corporate social responsibility*	*Using the analytical hierarchy process in the decision-making process of evaluating the accessibility of tourist attractions for the elderly*
17:01 – 17:20	**Ririn Diar Astanti**; Robertus Agung Prasetyo *Inventory model for supporting sustainable manufacturing and circular economy: a case study in a kitchen ware manufacturer*	Byungkwon Lee; Jeongwook Lee; **Kun Soo Park** *Optimal Inventory policy for upstream when downstream follows (s, S) policy*	**Mizuki Takeuchi**; Yuta Sakai; Masayuki Goto *A predictive model of user attributes from action history data based on VIME*	**Suzila Mohamed Yusof**; Sofiah Md Auzair; Amizawati Mohd Amir; Norida Basnan *Strategic management accounting towards value creation: a scoping review*	**Haruka Ohba**; Kawamura Yoshihiro; Hanabusa Takahiro; Shinya Mizuno *Construction and validation of a road grade estimation model using a state-space model*
17:21 – 17:40	**Koichiro Daidai;** Takeshi Yoroidaka; Shigehiro Karashima; Toshihiro Miyamoto; Toshiki Terao; Kotaro Yoshida; Kosei Matsue; Takeshi Yamashita; Ryoichi Murata; Hiroyuki Takamatsu; Hidetaka Nambo *Prognostic prediction by 3D convolutional neural network on PET-CT images of multiple myeloma patients*	**Yi-Hui Liang** *Customer relationship management for a hospital in Taiwan based K-means and fuzzy C-means clustering*	Khairur Rijal Bin Jamaludin; **Rosdan Bin Rosman;** Sha'ri Bin Mohd Yusof *The challenge of sustainable supply chain management in supply chain practices and operations in Malaysia automotive industry*	**Yi-Jing Chiu;** Lu Shin Li; Hsiao Hsiu Hui; Lian Jia Yi *Optimizing the utilization of residual powder in powder metallurgy for sustainable manufacturing through Taguchi optimization*	**Shota Ueki;** Takashi Hasuike *Linear weighted sum minimization method based optimal placement of electric kickboards*
End of Day 3 program					

Day 4: October 25th, 2023 (Wednesday)

		Day 4: October 25th, 2023 (Wednesday)			
		Parallel Session 4.1			
	Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**
	Session Chair	**Assoc. Prof. Dr. Yoshikoo Furusho (Yokohama Univ. of Art and Design, Japan)**	**Dr. Atsushi Imanaka (Nishinippon Institute of Technology, Japan)**	**Prof. Dr. Hirormi Ban (Sanjo City University, Japan)**	**Prof. Dr. James Liou (National Taipei University of Technology, Taiwan)**
	Sub-theme	**Technology Management (SDG 9)**	**Digital Transformation (SDG 9/12)**	**Business & Economic Decision-making Model (SDG 8)**	**Sustainable Operations Research (SDG12/13)**
Day 4: October 25th, 2023 (Wednesday) 08:20 – 10:20	08:20 – 08:40	**Youngjin Seol**; Seunghyun Lee; Jiho Lee; Janghyeok Yoon; Chang-Wan Kim; Youngchul Byun; Hyun Su Bak *An interpretable time series forecasting model for predicting NOx emission concentration in alloy steel electric furnace plants*	Atsushi Imanaka; Yoshiko Furusho; **Shutaro Omachi** *Development of Information design education using simple social listening methods*	**Po-Hsien Tseng**; Hsuan-An Kuo; Hsin-Ping Yang; Chen-Fu Chien *Modified ACF based on machine learning for semiconductor frontend production planning model and an empirical study*	Chih Wei Chien; **James Liou**; Po-Hsing Tseng; Ya-Shiuan Huang *Developing a hybrid model for distribution center selection and relief material supply chain network optimization*
	08:41 – 09:00	**Jeayeon Jung**; Jiho Lee; Janghyeok Yoon *A customer needs identification approach for new product development using Explainable Artificial Intelligence and Kano model*	**Yu-Fan Liu**; Ren-Hong Luo; Kang-Ting Ma; Chen-Fu Chien *Digital transformation for intelligence manufacturing in surface mount technology production lines and an empirical study of an advanced planning and scheduling system*	Yu-Chung Tsao; **Ho Thi Thu Ai** *A remanufacturing economic production quantity model with a trade-old-for-cash program*	**Masaharu Kaji**; Takashi Hasuike *Optimization of train operation plans for abnormal conditions considering intermediate shuttle operation under mutual through service*
	09:01 – 09:20	**Yi-Ting Zhan** *Machine learning applied to anomaly detection analysis of robot torque time series*	**Wei-Yung Liu**; Chia-Yu Hsu *Image-based uncommonly defect recognition for TFT-LCD array via contrastive learning*	**Yuka Sakamaki;** Haruka Yamashita *A study on factor analysis of satisfying mangoes based on adaptive design of experiments*	**Ayuka Mikami**; Takashi Hasuike *Optimization of power systems using photovoltaics considering supply and demand variability*
	09:21 – 09:40	**Seunghyun Lee**; Jiho Lee; Jae-Min Lee; Hong-Woo Chun; Janghyeok Yoon *Developing an R&D solutions generation model using problem-solution pattern of patents*	**Shogo Miyazaki**; Akimasa Otsuka; Fusaomi Nagata *Effect analysis of skin model shapes for a simple optic device in optical simulation*	Kwei-Long Huang; **Teng-Ying Chang**; Yung-Cheng Lai *Rule-based heuristic algorithm for trainset assignment under predictive maintenance scheme*	Po-Chih Kang; Ting-Yu Lin; **Tzu I Tsai**; Kuo-Ping Lin *Applying fuzzy seasonal long short-term memory network for carbon emissions of power plant forecasting*

		Tun Sri Lanang 1	Tun Sri Lanang 2	Sri Bendahara 1	Sri Bendahara 2
	09:41 – 10:00	**Yoshiko Furusho**; Atsushi Imanaka; Shutaro Omachi; Hayato Ishizuka *Curriculum management of web design education at art university*	**Tomoki Amano**; Ryotaro Shimizu; Masayuki Goto; Tomohiro Yoshikai *An improved algorithm based on self-supervised learning for multi-tag prediction of extreme weather events*	**Yasuhito Fujisawa**; Jiro Iwanaga, Takanobu Nozawa, Haruka Yamashita *Image recommendation model for Q&A questions based on Sentence-BERT*	**Takayuki Kataoka**; Katsumi Morikawa; Katsuhiko Takahashi *A multi-objective optimization model to minimize the total number of operators and total operation time in labour-intensive cells*
	10:01 – 10:20	**Wen-Sheng Zheng**; Chia-Yu Hsu *An empirical study on detection of polarity components based on deep learning*	**Soojeong Son**; Kwangyeol Ryu *Data conversion and quality classification of rubber product mixing process using deep learning*	**Hirormi Ban** *A research on user evaluation of electric toy robots using online reviews*	**Ting-Yu Lin**; Ping-Teng Chang; Kuo-Chen Hung; Yu-Cheng Liu; Kuo-Ping Lin *Developing a multi-variable long short-term memory model for Taiwan's high-speed rail passenger volume under COVID-19*

Break
Parallel Session 4.2

	Room	Tun Sri Lanang 1	Tun Sri Lanang 2	Sri Bendahara 1	Sri Bendahara 2
	Session Chair	**Dr. Ummu Ajirah Abdul Rauf (Universiti Kebangsaan Malaysia)**	**Prof. Dr. Jianian Zheng (Asia University, Taiwan)**	**Dr. Kaoru Kuramoto (Aoyama Gakuin University, Japan)**	**Prof. Meng Hau Li (National Formosa University, Taiwan)**
	Sub-theme	**Technology Management (SDG 9)**	**Digital Transformation (SDG 9/12)**	**Business & Economic Decision-making Model (SDG 8)**	**SDG & Operation SCM (SDG 12/ 13)**
Day 4: October 25th, 2023 (Wednesday) 10:30 – 12:30	10:31 – 10:50	**Ummu Ajirah Abdul Rauf**; Ainul Huda Jamil; Mazzlida Mat Deli; Siti Intan Nurdiana Wong Abdullah; Maryam Jamilah Ashaari *Validating the technology component on financial performance of Malaysian public higher education*	**Jawaria Ahmad**, Abdullah Al Mamun, Zafir Khan Mohamed Makhbul, Mohammad Nurul Hassan Reza, Khairul Anuar Mohd Ali *Green human resource management, competitive advantages, and green ambidexterity: using partial least squares structural equation behaviour and necessary condition analysis*	**Akiko Yoneda**; Ryotaro Shimizu; Shion Sakurai; Makoto Kawata; Haruka Yamashita; Masayuki Goto *Machine learning based experimental design and effectiveness verification for coupon measures with different discount amounts*	**Hsin-Wei Hsu**; Chao-Hui Liao *Modelling a fuzzy low-carbon food supply chain considering multi-period quality decline and uncertainty*
	10:51 – 11:10	**Wei Hsu**; Chia-Yu Hsu *Unsupervised fault detection using autoencoder with time series data*	**Koki Yamada**; Ayako Yamagiwa; Goto Masayuki *An efficient active learning approach based on BERT for job label classification problem*	**Ryo Iwata**; Kaoru Kuramoto; Satoshi Kumagai *Reproduction of new product diffusion process by positive and negative word-of-mouth and detection of chasm by CaR*	**Masumi Noto**; Takashi Irohara *Effectiveness of liquid organic hydride in hydrogen supply chain network*
	11:11 – 11:30	**Hsing Chen**; Chia-Yu Hsu	**Ayako Yamagiwa**; Masayuki Goto	**Haziman Zakaria**; Yudi Fernando; Diyana	**Meng-Hua Li**

	A study on constructing a golden path through multi-criteria virtual decision-making using deep learning	*Selection criteria of evaluation axes for impression map visualizations of product images*	Kamarudin; Yuserrie Zainuddin *Charting unseen pathways: exploring convergences between helix model and open innovation theories through scientometric insights*	*Integrating lean management and AI for smart manufacturing and digital transformation: a study on Taiwan's SMEs in the intelligent machinery industry*
11:31 – 11:50	**Zara Kiran**; Zafir Khan Mohamed Makhbul *Global research on e-HRM: a bibliometric review of existing literature*	**Takaharu Takikawa**; Yuna Seo *Factors related to anxiety about the introduction of DPPs: Civil servants' perspective*	Kenzo Ogi; **Masahiro Mineshita**; Norio Hibiki *Effectiveness of human-related variables in the credit risk model for business start-ups: effects of the age of founders, the years of work experience in the same industry, and prime start-up time*	**Ywh-Leh Chou** *A prediction model for supply chain resilience with considering financial indicators*
11:51 – 12:10	**Chih-Hung Jen**; Shu-Kai S. Fan; Du-Ming Tsai *Construct the auto-label system for defect recognition of wafer probe process in semiconductor manufacturing*	**Tatsuki Oike**; Haruka Yamashita; Ryotaro Shimizu *A study on image generation considering user attribute information by VQ-Conditional StyleGAN2*	**Kaoru Kuramoto**; Satoshi Kumagai *Pricing model based on demand forecast considering product classification*	Li-Chih Wang; **Tung-Ching Chen** *Development of a cloud tablet dispensing and packaging machine monitoring and control system*
12:11 – 12:30	**Asma-Qamaliah Abdul-Hamid**; Mohd Helmi Ali; Lokhman Hakim Osman; Ming-Lang Tseng *Circular economy quasi-effect and sustainability in palm oil industry: a review on moderating factors*	**Jia-Nian Zheng** *Predictive maintenance framework with smart machine box for traditional industry*	**Seungyun Lee**; Jaewook Lee; Dongbin Kim *Time series forecasting with Temporal Fusion Transformer*	**Takashi Shirakihara**; Masato Takanokura *Proposing a brand strategy for universities public relations using human-centered design*
Lunch Break				

Parallel Session 4.3				
	Room	**Tun Sri Lanang 1**	**Tun Sri Lanang 2**	**Sri Bendahara 1**	**Sri Bendahara 2**
	Session Chair	**Prof. Dr. Fuyume Sai (Daito Bunka University, Japan)**	**Prof. Dr. Che-Wei Chou (Feng Chia University, Taiwan)**	**Prof. Dr. Law Siong Hook (Universiti Putra Malaysia, Malaysia)**	**Dr. Tania Akter (BRAC University, Bangladesh)**
	Sub-theme	**Technology Management (SDG 9)**	**Digital Transformation (SDG 9/12)**	**Business & Economic Decision-making Model (SDG 8)**	**SDG & Operation SCM (SDG 12/13)**
Day 4: October 25th, 2023 (Wednesday) 13:30 – 15:30	13:30 – 13:50	**Fuyume Sai;** Meiling Zeng *Conceptualizing and analysing blockchain technology acceptance*	Che-Wei Chou; Shang-Yi Fang *Anomaly detection of machining tooling in CNC machine*	**Law Siong Hook** *Green innovation and CO_2 emissions: do formal and informal institutions matter?*	**Tania Akter;** Md Shamimul Islam *Drivers and barriers of contactless logistics in the FMCG industry of Bangladesh under the pandemic*
	13:51 – 14:10	**Chin-Ying Hsu**; Rou-Rou Shen; Chia-Hsuan Lee; Ying-Po Hsu; Tien-Lung Sun *Enhanced evaluation of lower limb endurance and balance in older adults using AI image recognition and feature extraction*	**Seung-Hyun Choi**; Kwang-Jae Kim *Development of interpretable quality predictive model with production log data using multi-modal transformer network*	**Mayato Hattori;** Kotomichi Matsuno; Takahiro Ohno; Shinya Takata; Yoshikuni Edakawa;Takaaki Kawanaka *A motivation formation model of tangible goods collector*	**Geon Hee Yang**; Jeongin Koo; Youngjun Yoo; Hyunchul Tae *Federated clustered learning leveraging server data*
	14:11 – 14:30	**Hayato Ishizuka**; Kosuke Tsuji; Yoshiko Furusho *About the original process in product design*	**Abdiqani Muse Hassan**; Yeneneh Tamirat Negash *Investigating the barriers to digitalization in circular construction: a stakeholder theory approach*	**Takumi Nishida**; Shuhei Ota; Nobuaki Ishii *Long-term capital investment and evaluation for power supply with small module infrastructure*	**Rumi Yamamoto**; Naoki Takahashi; Noritomo Ouchi *Impact of the fashion consciousness of other users on customer satisfaction in a fashion e-commerce mall*
	14:31 – 14:50	Che-Wei Chou; **Wei-Cheng Chiu** *Rebalancing overhead hoist transport strategy in automated material handling system using actor-critic algorithm*	David Josua Wola; Praditya Ajidarma; **Mohammad Mi'radj Isnaini** *Postpartum mother LOS prediction model development using machine learning in a Northern Sulawesi Hospital: RB hospital*	**Kirin Tsuchiya**; Ryotaro Shimizu; Masayuki Goto *A novel latent class model for estimating the relationship between user preferences and item image features*	**Chen-Yang Cheng** *The research of solving vehicle routing problems with implicit preferences*
	14:51 – 15:10	**Yuto Nunome**; Yuta Sakai; Masayuki Goto *Analysis of purchase history data and reviews in embedded space*	**Jaekyeong Moon**; Jae Soo Hong; Hyunchul Tae *A novel approach to recognize human posture using skeleton-based object classification*	**Akira Tanihata**; Haruka Yamashita *A recommendation system of Q&A services for respondents*	**Hennie Husniah**; Andi Cakravastia; Bermawi P. Iskandar *Cost analysis for used product sold with lemon law two-dimensional warranties*
	15:11 – 15:30	**Siku Kim;** Kwangyeol Ryu	**Risa Iwai**; Ryotaro Shimizu; Haruka Yamashita	**Shania Andea Perdana**; Chieh Lee	**Taichi Nakamura;** Takehiro Kasahara;

					Takayuki Kajiwara; Hidetaka Nambo *Timing anomaly detection in industrial equipment using deep learning*
		AI-based smart-human robot collaboration system multi-collaborative task distribution	*A study on recommendation of fashion coordination posts based on image and linguistic information*	*How tariff and non-tariff barriers affect supply chain members*	

Break				
Parallel Session 4.4				

	Room	Tun Sri Lanang 1	Tun Sri Lanang 2	
	Session Chair	**Dr. Suguna Sinniah (Universiti Kebangsaan Malaysia)**	**Prof. Dr. Ping-Shun Chen (Chung Yuan Christian University, Taiwan)**	
	Sub-theme	**Technology Management (SDG 9)**	**Business & Economic Decision-making Model (SDG 8)**	
Day 4: October 25th, 2023 (Wednesday) 15:40 – 17:00	**15:41 – 16:00**	**Yee Yeng Liau;** Kwangyeol Ryu *Enabling shared subtask execution in human-robot collaboration system with two heterogenous cobots*	**Yuka Nakamura**; Ayako Yamagiwa; Hokuto Sasaki; Masayuki Goto *Experimental design based on machine learning for finding customer groups with high measure effects*	
	16:01 – 16:20	**Yu-Han Teng**; Chia-Yu, Hsu *Supervised multi-label learning for defect classification of multilayer ceramic capacitor images*	Chin-Hui Lai; Yu-Ju Lu; **Ping-Shun Chen** *Using data mining techniques to predict outpatient ultrasound examination time*	
	16:21 – 16:40	**Jing-De Gu**; Chia-Yu Hsu *Glue frame image restoration using computer vision and deep learning technology*	**Ting-Hau Shih;** Cheng-Fu Huang; Yi-Kuei Lin *Reliability assessment of a power dispatch system considering a mix of renewable energy sources*	
	16:41 – 17:00	**Shan-Chi Tsai**; Chia-Yu Hsu *A study on building a machine health indicator for the exposure machine using Bayesian network*	**Akari Nando**; Naoki Takahashi; Noritomo Ouchi *Comparison of factors affecting customer satisfaction and shopping value between offline and online stores in the apparel industry*	
	18:00 – 21:00	**Closing Gala Dinner of APIEMS Kuala Lumpur 2023**		**Tamingsari Grand Ballroom, Royale Chulan KL**

End of Day 4 program

	08:21 – 08:30	Registration	
	Session	***Online Parallel Session 5.1***	**Online Parallel Session 5.2**
	Session Chair	**Dr. Asma Qamaliah Abdul Hamid (Universiti Kebangsaan Malaysia, Malaysia)**	**Sara Kanwal (Universiti Kebangsaan Malaysia)**
	Sub-theme	**Innovation & Supply Operation (SDG 9/12/13)**	**Innovation & Supply Operation (SDG 9/12/13)**
	08:31 – 08:50	**Etsuko Kusukawa**; Yuki Yoneda *Optimal operation and social evaluation in a closed loop supply chain considering quality and reuse of used electric vehicle batteries under government subsidy*	**Hiroki Kozu**; Yukio Maruyama; Yutaka Shirai; Yasuhiro Tsujimura *A study of disease words classification for potential anxiety factors extraction in medical hospitality*
	08:51 – 09:10	**Maiko Yamamoto**; Takahiro Ohno *Structure and role of purpose (function) expression sentences for system design*	**Kinya Tamaki**; Jirou Usugami; Tomofumi Takamatsu; Yoshiki Nakamura; Masahiro Arakawa; Young Won Park; Masamitsu Kiuchi *Research framework of new theories and system techniques for circular economy (CE) in Japan: based on international trend investigations on CE policy/regulation/standardization, and leading company case studies by industry*
	09:11 – 09:30	**Etsuko Kusukawa**; Masaya Yoshino *Evolutionary game analysis and long-term strategy selection in the biofuel supply chain under government subsidy*	**Takeru Miyoshi**; Makoto Koshino; Hidetaka Nambo *Sensor-based human activity recognition using a deep learning model focusing on multi-layer perceptron*
	09:31 – 09:50	**Haruki Seto**; Etsuko Kusukawa *Optimal spot sale and presale strategies and social welfare of fresh food supply chain considering service and freshness levels*	**Biswajit Sarkar**; Jei-Zheng Wu *Buy-online and pick-up-in-store through omni channel: a new paradigm of retail management*
	Break		
	Session	***Online Parallel Session 5.3***	**Online Parallel Session 5.4**
	Session Chair	**Dr. Mazzlida Mat Deli (Universiti Kebangsaan Malaysia)**	**Dr. Siti Intan Nurdiana Wong Abdullah (Nottingham Trent University, UK)**
	Sub-theme	**Innovation & Supply Operation (SDG 9/12/13)**	**Innovation & Supply Operation (SDG 9/12/13)**
	10:00 – 10:20	**Etsuko Kusukawa**; Yuki Tsukamoto *Optimal operation of green supply chain and social evaluation considering consumers environmental preferences and warranty period of green product under government intervention*	**Hiroyuki Kawabe**; Yuko Shimomura; Shuichi Seto *Recognizing graph elements using deep learning for visually impaired students*
	10:21 – 10:40	**Etsuko Kusukawa**; Kaito Ueda *Optimal operation and social evaluation of a dual-channel green supply chain with 3PL considering delivery lead time and carbon emissions under government intervention*	**Siti Intan Nurdiana Wong Binti Abdullah**; Syed Shah Alam; Wan Mohd Hirwani Wan Hussain; Mazzlida Mat Deli; Maryam Jamilah AshaAri; Ummu Ajirah Abdul Rauf *Optimizing online travel technology towards sustainable smart tourism among gen-y tourists*

		Kazuki Iwamoto; Kazuko Morizawa	**Maki Arame**; Ayako Yajima; Maho Suzuki; Kinya Tamaki
	10:41 – 11:00	*A mixed integer programming approach for efficient last-mile delivery of emergency relief supplies*	*Verification of the effects of a digital marketer development program for promoting the circular economy: Behavior analysis of students in PBL classes using action planning theory*
	11:01 – 11:20	**Ren Koike**; Etsuko Kusukawa *Optimal operation and social welfare evaluation of a dual-channel green closed-loop supply chain with CSR under a government intervention in environmental policy*	
	11:30	**Closing**	

END OF APIEMS KUALA LUMPUR 2023

- THANK YOU -